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ABSTRACT

A study examined the effects of a year-long inservice program to help experienced teachers in one elementary school appreciate and use recent research in reading comprehension. All teachers at an urban K-6 elementary school in a midwestern city attended the weekly inservice sessions which focused on the importance and role of background knowledge in reading comprehension. Other aspects of comprehension that were emphasized included recognizing story structure and sequence, distinguishing between inferred and given information, deriving "main ideas" from details and inferences, assessing comprehension, and developing different kinds of comprehension questions. At the beginning and end of the school year the teachers were asked to list terms that yielded a semantic picture of the concepts participants associated with reading comprehension. From this inventory, a list of 45 word pairs was constructed. Teachers were then asked to circle the member of each pair closer to their ideas of reading comprehension. Thirty-one sets of scores were obtained on the first occasion, and 29 sets on the second occasion. Results indicated that this project noticeably influenced what the teachers thought about reading comprehension. Participants seemed to acquire an enriched, more differentiated conception of comprehension, demonstrated by a larger, more precise vocabulary about comprehension. Findings suggest that the teachers gained a greater appreciation of the factors involved in reading comprehension. (NKA)

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The Effect of a Year-long Inservice Program on Elementary Teachers' Conceptions of Reading Comprehension

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The Effect of a Year-Long Inservice Program on Elementary Teachers' Conceptions of Reading Comprehension

ABSTRACT

A current problem is how to help experienced teachers appreciate and use recent research on reading comprehension. Improved comprehension instruction may depend on teachers' acquiring a fuller understanding of comprehension. The effect of one elementary school's effort to meet this need is reported.

The authors conducted a weekly inservice program on comprehension throughout the school year. To estimate how and if teachers' understanding of comprehension had changed through this experience, they were asked at the beginning and end of the year to list those terms they associated with comprehension. Each time, the 10 most frequently mentioned terms were re-presented to the teachers in a list of 45 paired terms. Teachers chose the member of each pair most central to their conception of comprehension.

Results of factor analyses showed that, by year's end, the teachers had acquired a richer, more differentiated conception of comprehension, which could provide the basis for more informed and independent instructional decisions regarding comprehension.

The Effect of a Year-Long Inservice Program on Elementary Teachers' Conceptions of Reading Comprehension

The past several years have witnessed significant advances in research on reading, particularly with regard to comprehension processes (Anderson, Hiebert, Scott, & Wilkinson, 1985). Only recently, however, have these developments begun to influence noticeably the basal reading series which serve as the predominant vehicles of reading instruction in American classrooms (Anderson, Osborn, & Tierney, 1984; Venezky, 1987), at least at the elementary level. This situation, together with a largely experienced population of teachers whose training in reading very likely occurred many years previously, suggests that a good proportion of today's classroom teachers may not be adequately prepared to utilize our expanded understanding of reading comprehension in everyday reading instruction.

To the extent that this circumstance is viewed as undesirable by both teacher educators and teachers, it presents a real challenge to these groups to find reasonable means of helping inservice teachers appreciate newer developments in research on comprehension and their implications for practice. To require experienced classroom teachers, many of whom already hold advanced degrees, to take formal graduate courses for this purpose may not be either feasible or appropriate. One- or two-day inservice "workshops" are unlikely to be adequate or effective. Alternative methods of addressing this problem need to be explored. This article reports on one school's efforts to deal with this issue through a year-long inservice program.

Various responses to the challenge of translating research into improved instructional practice in reading have been described in the literature during the past few years. These have involved attempts to alter reading instructional materials, teacher behaviors, or both (Beck & McKeown, 1987; Beck, Omanson, & McKeown, 1982; Calfee & Henry, 1986; Roehler & Duffy, 1984; Tierney, Tucker, Gallagher, Pearson, & Crismore, 1985). While some of these projects have reported impressive results, they have almost all been rather intensive efforts which were very demanding in terms of the time and materials needed to support them. Where such resources are available, the existing literature can offer useful guidelines for practice, particularly in the work of Beck and her colleagues (Beck & McKeown, 1987; Beck, Omanson, & McKeown, 1982). However, many, if not most, school districts will not have access to such extensive resources.

Another problem faced by any attempt to alter comprehension instruction is the acknowledged difficulty of engendering long-term change in practice, given teachers' apparent comfort with traditional procedures and materials, and the instructional, intellectual, and situational constraints on change experienced by most classroom teachers (Brophy, 1984; Duffy & Ball, 1986; Duffy & Roehler, 1985). The complexity of the classroom environment and the necessity to maintain, within it, a smooth-flowing pace on instruction, inhibit teachers' ability to make on-the spot pedagogic decisions (Brophy, 1984; Duffy & Ball, 1986).

One response to this dilemma, as it pertains to reading comprehension, is to recommend the "routinization" of instructional principles accomplished primarily, "...through vastly expanded and improved teachers' reading manuals accompanying published curricula" (Brophy, 1984, p. 91). Others, however, (Beck & McKeown, 1987; Duffy & Roehler, 1985), emphasize the importance of first

helping to provide teachers with a rich conceptual understanding of the issues involved in comprehension instruction, regardless of what supportive material may be utilized subsequently, in order for interventions to be successful. As Beck and McKeown (1987) argue

> ...the quality of a teacher's implementation of a given instructional notion is directly related to the quality and depth of the teacher's understanding of that notion. That is, the teacher who will be most effective in tailoring instruction and materials to the needs of students is the teacher who most fundamentally understands the issues involved. (p. 344)

Calfee and Henry (1986) also stress the wisdom of basing specific prescriptions for change on a "coherent theoretical framework" (p. 208). Sharing this perspective, the project described here focused on expanding teachers' conceptions of reading comprehension, within a district-mandated inservice format, as a basis from which changes in instructional practices might then be attempted.

This project -- a year-long inservice program at one K-6 elementary school ("B. School") in an urban school district in a Midwestern city -- was conducted by the authors at the invitation of the principal and staff of the school. Each school in the district has a "site-plan committee," composed primarily of teachers, which helps identify specific school goals for each academic year. Additionally, for two years, the district mandated that teachers attend two in-service sessions per week during the school year. The site-plan committee, with the endorsement of the staff, determined how this time was to be used. The principal of B. School was particularly interested in improving instruction in reading comprehension, and she had helped to create a receptivity among her staff to a collaborative focus on this issue. For the year under consideration,

the site-plan committee proposed, and the staff agreed, that one inservice session per week be devoted to reading comprehension. The authors were then asked to lead these sessions, which the entire teaching staff of the school would attend. The specific question addressed by this report is whether such an inservice project can produce demonstrable changes in the way teachers view reading comprehension.

Method

Summary of the Project

Given the constraints of classroom reading instruction and the format within which the project was to be conducted, the authors agreed that a reasonable approach would be to try to help teachers see how existing materials, including basal reader stories, could be used to improve comprehension instruction. The intention was to have staff members, through group discussion and participation, derive an enhanced conception of reading comprehension that could guide them toward more effective comprehension instruction in the classroom. An early and continuing focus of the sessions was on the importance and role of background knowledge in comprehension. Other aspects of comprehension that were emphasized during the year included recognizing story structure and sequence; distinguishing between inferred and given information; deriving "main ideas" from details and inferences; assessing comprehension, especially through retellings; and developing skill in writing different kinds of comprehension questions.

As other investigators have observed (Brophy, 1984; Calfee & Henry, 1986), many of the teachers did not seem comfortable with the degree of reflection asked of them initially, nor confident enough to assume responsibility for altering existing lesson structures. Predictably, immediate instructional

concerns appeared to take precedence over more theoretical discussions. Consequently, after about a month, the style of the weekly sessions became somewhat less Socratic and more directive than at first intended. Written material, covering various aspects of comprehension and comprehension instruction, was prepared by the authors and discussed with the participants. Teachers were continually urged to try out in their classes ideas which had been discussed at these sessions, and to report back to the group on the success of their efforts. Although only a few teachers regularly responded to this request, their comments provoked considerable interest among the other participants.

Data

In order to get some indication of the degree to which participants' ideas regarding comprehension and comprehension instruction may have changed as a result of this year-long experience, a procedure which probed teachers' conceptions of reading comprehension was used twice. Once near the beginning of the school year and once near the end, the teachers were asked to list terms which were related to their notion of reading comprehension and then, subsequently, to judge the centrality of the most frequently mentioned terms to their views of comprehension. In this way, a kind of semantic picture could be derived of the concepts that the participants tended to associate with comprehension. If this picture appeared to change from the beginning to the end of the year, then it could be inferred that the teachers' conceptions of comprehension had altered in some discernible way.

At the third session at B. School, each participant was asked to make a list of those one- or two-word terms which were most closely connected to his or her conception of reading comprehension. From these lists, the 10 most frequently mentioned terms were selected. (Cognate terms were considered

together on agreement of the two authors.) Each of these terms was then paired with every other term on the list, creating a total of 45 word pairs. A list of these 45 paired terms was constructed, with order of mention of each term being counterbalanced. The position of each pair on the list was determined by assignment of random numbers. At the following session, each teacher was asked to circle the member of each pair that was closer to his or her idea of reading comprehension. In this way, a "score" (of from 0 to 9) could be determined for each term for each participant. Thirty-one sets of scores were obtained in this manner on the first occasion.

A similar procedure was followed at the end of the year. Teachers were again asked to list those terms they associated with reading comprehension. The 10 terms most frequently mentioned were then identified and paired with each other to make 45 items. At the last session of the year, each participant was again requested to circle the member of each pair which was more closely related to his or her conception of comprehension. In this way, different lists were obtained on the two occasions, although some overlap in terms occurred. Twenty-nine sets of scores were obtained on the second occasion. A copy of the list of paired words used at the end of the year is shown in Appendix A.

A separate factor analysis was performed on each set of scores, in order to see whether identifiable clusters of terms would be derived. In both instances, oblique rotations were performed since the terms were acknowledged to correlate with each other.

Results

The means scores for each term, for both sets of data, are shown in Table 1. As can be seen there, the terms chosen most frequently on the first occasion

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Insert Table 1 about here

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were understanding and remembering. Because of the small number of cases (31 in one instance, 29 in the other) contributing to the factor analyses, only factor loadings of .50 or above will be considered in the naming of factors. The factor analysis performed on the first set of comprehension terms produced four factors. Factor loadings are shown in parentheses after the terms discussed. One factor might be considered a "Literal Components of Comprehension" factor. Terms with significant loadings on this factor are remembering (facts) (.75), details (.74), recall (.74), and sequence (.51). A second factor appears to be a cognitive or general comprehension factor, since it includes terms such as understanding (.87) and thinking (.94). A third factor is represented by decoding (.82) alone, while what might be considered a "Management" factor includes only the term directions (.67). The terms listening and cause/effect did not load significantly on any of these factors, according to the criterion used.

The second factor analysis, performed on data collected at the end of the school year, also produced four factors with oblique rotation. These were not so clearly identifiable as those obtained with the first analysis, probably because, by this time, all of the terms included had some clear relationship with comprehension. Terms less directly related to comprehension, such as directions and decoding, which had been part of the first analysis, had not been

mentioned frequently enough to be included on the second occasion. Five terms included in the first analysis — cause/effect, understanding, details, recall, and sequence — were also represented in the second. The five new terms in the second data set were vocabulary, inference, background information, predicting, and main ideas. The terms with the highest mean number of selections, as shown in Table 1, were understanding and main ideas.

One factor in the second analysis is represented exclusively by the term vocabulary (.75). A second factor might be considered a "Global Comprehension" factor, as it is described by the terms understanding (.88) and main ideas (.69). A third factor may represent structural aspects of comprehension, since high loadings on this factor were obtained by sequence (.65) and recall (.63). Recall (.57) is also represented on the fourth factor, which appears to be a kind of factual or "Literal Comprehension" factor, as it includes, in addition, details (.68). Three terms with high mean selection scores (see Table 1) -- cause/effect, background information, and inference — did not load highly on any of the factors.

Discussion

Caution must be exercised in drawing conclusions from the data reported above because of the limited number of cases represented. However, the data do suggest that this year-long inservice project did have some noticeable influence on the way this group of teachers thought about reading comprehension. Participants did seem to acquire an enriched, more differentiated conception of comprehension by the end of the year, as shown here by a larger, more precise vocabulary for talking about elements of comprehension. As indicated by the terms chosen, the teachers appear to have gained a greater appreciation of the several factors involved in reading comprehension.

This view is supported by responses to open-ended questions returned by about a third of the participating teachers. For example, more than half of the replies to a question which asked how the respondent's view of comprehension had changed during the year specifically stated that a better understanding of comprehension had been obtained. One reply, for instance, mentioned that the project, "has shown me ... (a) total picture of comprehension and has expanded my knowledge of it."

A better understanding of comprehension does not, of course, guarantee improved comprehension instruction. However, if we accept the view of Beck and McKeown (1987) and others that the effectiveness of an instructional innovation depends on the degree to which a teacher understands the basis for that innovation, then broadening a teacher's conceptual framework for comprehension can provide a crucial foundation for instructional change. Additionally, the importance, in general, of a shared language or vocabulary of teaching for making instructional decisions more deliberate and self-aware has been emphasized by several authors (e.g., Good & Brophy, 1978; Little, 1982). To be able to name and identify a concept such as background information is a significant first step toward being able to utilize that concept in everyday instruction. Thus, the acquisition of a richer and better understood set of comprehension concepts should enable the teachers who participated in this project to improve their reading comprehension instruction independently and with greater confidence.

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Table 1

Mean Number of Times Each Comprehension Term Was Selected at Each Data Collection Occasion

First List of Paired Terms		Second List of Paired Terms	
Term	Mean[a]	Term	Mean[b]
cause/effect	4.03	background information	4.62
decoding	2.68	cause/effect	4.97
details	3.45	details	3.28
directions	3.10	inference	4.21
listening	3.29	main ideas	5.76
recall	3.68	predicting	3.76
remembering	5.10	recall	3.93
sequence	3.77	sequence	3.66
thinking	4.65	understanding	5.79
understanding	5.94	vocabulary	3.21

[a] $n = 31$

[b] $n = 29$

APPENDIX A

Your Name _____ Date _____

Your Concept of "Reading Comprehension"

DIRECTIONS: For each of the pairs of terms below, circle the member of each pair which is closer to your conception of "reading comprehension." For example, if the pair contained the terms "thinking" and "directions" and "thinking" was closer to your idea of reading comprehension, you would circle that term: "directions -- "thinking". (NOTE: "cause/effect" is to be considered one word or term.)

1. vocabulary -- recall
2. sequence -- details
3. vocabulary -- understanding
4. inference -- vocabulary
5. details -- understanding
6. sequence -- inference
7. details -- inference
8. understanding -- background information
9. cause/effect -- vocabulary
10. predicting -- cause/effect
11. sequence -- predicting
12. cause/effect -- inference
13. inference -- main ideas
14. understanding -- main ideas
15. inference -- understanding
16. vocabulary -- predicting
17. cause/effect -- background information
18. recall -- main ideas
19. details -- vocabulary
20. main ideas -- cause/effect
21. inference -- recall
22. understanding -- sequence
23. background information -- predicting
24. predicting -- recall
25. main ideas -- background information
26. sequence -- vocabulary
27. background information -- vocabulary
28. vocabulary -- main ideas
29. recall -- background information
30. cause/effect -- details
31. background information -- details
32. background information -- sequence
33. background information -- inference
34. main ideas -- sequence
35. details -- recall
36. details -- predicting
37. predicting -- main ideas
38. recall -- cause/effect
39. main ideas -- details
40. understanding -- cause/effect
41. recall -- understanding
42. inference -- predicting
43. predicting -- understanding
44. sequence -- recall
45. cause/effect -- sequence